

Appl. No. 10/706,059
Reply Brief Dated November 8, 2007
Reply to Examiner's Answer of September 17, 2007

Attorney Docket No. 81784.0290
Customer No.: 26021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Tsuyoshi YAMAMOTO, et al.

Serial No: 10/706,059

Confirmation No.: 6351

Filed: November 12, 2003

For: TILT CONTROL METHOD AND
APPARATUS FOR OPTICAL DISC
RECORDING AND PLAYBACK
APPARATUS

Art Unit: 2627

Examiner: Thomas D. Alunkal

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November 8, 2007

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Signature

11/08/07

Date

Mail Stop Appeal Brief
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REPLY BRIEF

Dear Sir:

This Reply Brief is being filed in response to the Examiner's Answer dated
September 17, 2007.

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Status of the Claims:

Claims 1-4 are pending. In the final Office Action of October 16, 2006, claims 1-4 are rejected. Claims 1-4 are the claims being appealed.

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The Ground Of Rejection To Be Reviewed On Appeal

The ground of rejection to be reviewed on appeal is the rejection of claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,434,096 of Akagi et al in view of U.S. Patent 7,046,600 of Matsumoto.

Arguments:

In the final rejection dated October 16, 2006, claims 1-4 are rejected as unpatentable over Akagi et al. in view of Matsumoto. Akagi et al. is relied upon as disclosing an offset value supplied to a tilt adjustment coil. Matsumoto is relied upon as disclosing views of a maximum β value obtained from a reproduction signal. In the Amended Appeal Brief filed June 4, 2007, Applicant maintains that Akagi does not show or suggest the two key features in accordance with the present invention. More specifically, Akagi does not show or suggest (1) recording an offset adjustment signal in a test recording area provided on an optical disc, wherein the offset adjustment signal is recorded while modifying a driving signal level supplied to the tilt adjustment coil, and (2) playing back an RF signal of the offset adjustment signal that was recorded to the optical disc. As further pointed out by Applicant, Matsumoto only shows features concerning β value and does not show or suggest the features (1) and (2) of the present invention.

In the section entitled "(10) Response to Argument" which begins on page 6 of the Examiner's Answer, the Examiner disagrees with Applicant's contentions. While it is acknowledged that memory in Akagi in which the offset signal is stored is not the optical disc itself but rather a separate memory circuit 319 as shown in Fig. 17, reference is made to lines 6-12 of column 54 of Akagi which are said to clearly disclose "that the offset signal is stored and reproduced (reproduction of the offset signal corresponds to element (2) above) on a specific part of an optical disc. In this portion of Akagi, the memory corresponds to the disc itself. Hence, it is evident that various forms of memory are used in the tilt control apparatus of Akagi to store the offset signal, including the optical disc itself". Reference is further made in the Examiner's Answer to lines 40-42 of column 12 of Akagi which recite "The offset amount of the tilt error signal depending on the movement direction of

the optical pick up is stored beforehand, the above mentioned store offset is read". It is said in this connection "This portion of Akagi's disclosure suggests that the optical pickup is moving, which in turn, requires that a driving signal be supplied to the tilt adjustment coil to necessitate movement of the optical pick up. This directly corresponds to the "...offset adjustment signal is recorded while modifying a driving signal level supplied to the tilt adjustment coil" feature of element (1) above". Akagi et al. is said to disclose the main feature of element (1).

The rejection of the claims on these bases are respectfully traversed. The present invention has a configuration in which a tilt adjustment is performed by adjusting a tilt of an objective lens according to a level of a driving signal to be supplied to a tilt adjustment coil. In contrast to this, Akagi discloses a configuration in which a tilt adjustment is performed by controlling a tilt of an optical pickup or a disc. Furthermore, the present invention plays back an offset adjustment signal recorded in a test recording area of an optical disc while modifying a driving signal level to be supplied to the tilt adjustment coil and detects the driving signal level at which a β value obtained RS signal reaches maximum to thereby set an offset value for the tilt adjustment coil. In other words, the present invention focuses on a characteristic that a β value becomes greater as the tilt adjustment improves, and sets an offset value of the tilt adjustment coil at a driving signal level at which the β value reaches maximum.

In contrast, Akagi obtains an offset amount of data having greatest RS amplitude value among reproduced sample data, and nowhere does Akagi refer to a β value.

Although the Matsumoto reference discloses a β value, this is used to set a recording laser power value most appropriate to a recording linear velocity and is not used to set an offset value for a tilt adjustment coil.

As noted above, the Examiner's Answer asserts that lines 6-12 of column 54 of Akagi disclose an offset value. However, Akagi merely discloses recording a sample signal and reading the recorded sample signal to obtain an offset signal. Nowhere does Akagi disclose modifying a signal level for the tilt adjustment coil and recording an offset adjustment signal on a disc.

Furthermore, Applicant wishes to note that Akagi discloses performing reading while modifying a driving signal to be supplied to a tilt adjustment coil with reference to a value in a memory. In contrast, the present invention performs recording on a disc while modifying a driving signal to be supplied to a tilt adjustment coil.

Consequently, claims 1-4 are again submitted to clearly distinguish patentably over the attempted combination of Akagi et al. and Matsumoto. It is again respectfully requested that the final rejection of claims 1-4 be reversed, and that such claims be determined to be allowable.

The original appeal brief filed on March 26, 2007 authorized charging of the fee to our Deposit Account No. 50-1314. Any other fees due should also be charged to Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: November 8, 2007

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